



**COLLOIDS**

THE MAKERS OF MASTERBATCH

**FOR BUILDING AND  
CONSTRUCTION APPLICATIONS**



## MASTERBATCH FOR BUILDING AND CONSTRUCTION APPLICATIONS

Plastics are becoming increasingly important in today's Building and Construction industries, often replacing existing materials due to their improved performance. New applications are always being developed that need to encompass the requirements of strict building codes and regulations.

Colloids has a proven capability to deliver products meeting exacting standards and providing materials with the necessary functional requirements of durability, strength, UV/weather resistance, flame retardancy and antimicrobial properties etc. in addition to appearance.

We offer a comprehensive product range and have vast experience in designing fully tailored formulations based on specific customer requirements. This allows designers, engineers and processors to explore the many technical and aesthetic options available.

We are a highly regarded supplier to these markets through our relationships with global polymer producers and converters



# Contents

This document contains information about a selection of products which are regarded as the most popular Masterbatches for Building and Construction Applications.

Simply click on the title of the Masterbatch you would like more information on.

Other grades are available on request and technical data sheets are available for all our products. For more information please contact the Colloids Sales Team on +44 (0) 151 546 9222.

PLEASE NOTE: The product information contained within this pdf is based on our general experience and does not constitute a specification. Since many factors affect the use of our products, no warranty is given or implied with respect to this information or patent infringement. We do not accept liability for any loss or damage arising from the use of this information. All sales are subject to our standard terms and conditions of sale.

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## Table Reference Information

**\*Colour indication only:**

If an accurate match is required customer should always trial material in their own polymer base – samples available on request. Evaluation on colour to RAL and Pantone® reference is based on Masterbatch let down in LDPE at 2%.

**\*\*Heat Stability:** Maximum recommended processing temperature.

**\*\*\* Light fastness of pigments:** Scale 1-8 assessed using "Blue Wool Scale", 8 denotes highest performance i.e. best resistance to fading.

**\*\*\*\* Weather fastness of pigments:** 1-5 assessed using "International Gray Scale" 5 denotes highest performance i.e. lowest fading outdoors. Ratings 3 and below are not recommended for long-term outdoor use. Light and weather fastness relate to pigment performance only and rely on the appropriate polymer stabilisation system to be present. All declarations relating to heat stability, light fastness and weather fastness are based on a Masterbatch addition rate of 5% in LDPE .

**\*\*\*\*\*Food contact:** 'Tick' means that the Masterbatch is generally accepted for food packaging application in most countries. For specific details please contact the Colloids sales office

**\*\*\*\*\*EC 94/62:** 'Tick' means that the Masterbatch conforms to the new EC Packaging Directive which controls heavy metal content.



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## Symbol Reference Guide

✓ = Suitable, \* = Partial suitability, X = Not suitable

### Bespoke products

For non standard applications Colloids can offer a rapid colour matching and formulation development service creating masterbatches specific to our customers needs.

Bespoke colours, including blacks and whites, can be engineered to encompass a whole range of effects and finishes for some of today's most demanding markets.

We can also develop and produce coloured and natural products incorporating differing functional properties such as antistatic, UV stability, mould release, antibacterial etc.

Formulations can also be designed to give defined physical performance characteristics using the latest pigment and polymer technologies. This includes special black, white and conductive products.

Our technical team continues to work closely with our customers to develop specific formulations.

This may involve improving product performance or offering solutions for new markets and applications.

### Additive products

GRADE	POLYMER BASE	DESCRIPTION	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office						RECOMMENDED USE					COMMENTS
			PE	PP	PS	ABS	PA	PET	EXTRUSION FILM	EXTRUSION – PROFILE/SHEET	INJECTION MOULDING	BLOW MOULDING	COMPOUNDING	
AP 0170 LD	PE	PROCESS AID	✓	✓	X	X	X	X	✓	✓	✓	✓	✓	Prevents die build up and melt fracture
AS 0104 PE	PE	ANTISPLIT/EXTENDER	✓	✓	X	X	X	X	✓	✓	✓	✓	✓	Highly loaded calcium carbonate masterbatch
CL 4175 PE	PE	PURGING AGENT	NA	NA	NA	NA	NA	NA	✓	✓	✓	✓	✓	Efficient purging agent
FA 0701 PE	PE	BLOWING AGENT	✓	✓	✓	X	X	X	X	✓	✓	X	X	Highly loaded endothermic masterbatch
FA 0979 PP	PP	BLOWING AGENT	X	✓	X	X	X	✓	✓	✓	✓	X	X	For use in film, raffia and pipe coating
FA 5467 EV	EVA	BLOWING AGENT	✓	✓	✓	✓	✓	X	X	✓	✓	X	X	High temperature neutral non-plating universal blowing agent
FR 0667 LL	PE	FLAME RETARDANT	✓	✓	X	X	X	X	*	✓	✓	✓	✓	Allows compliance with UL 94 V2 (1.6mm) in CoPP. PBDPO free
FR 0930 PE	PE	FLAME RETARDANT	✓	X	X	X	X	X	✓	✓	✓	✓	✓	Chlorinated flame retardant, suitable for foamed applications
FR 1453 PE	PE	FLAME RETARDANT	✓	✓	X	X	X	X	✓	✓	✓	✓	✓	Allows compliance with DIN 4102 B1 when used in XLPE foam and French M1. PBDPO free
SB 1423 PE	PE	SLIP/ANTIBLOCK	✓	✓	X	X	*	*	✓	✓	✓	✓	✓	Slow acting slip/antiblock properties
SB 6616 PE	PE	SLIP/ANTIBLOCK	✓	✓	X	X	*	*	✓	✓	✓	✓	✓	Slow acting slip/antiblock properties (higher loading)
SL 6948 PE	PE	SLIP	✓	✓	X	X	*	*	✓	✓	✓	✓	✓	Fast acting slip agent

ST 0860 PE	PE	ANTISTATIC	✓	✓	X	X	X	X	✓	✓	✓	✓	✓	Amine free antistatic agent
ST 1028 PS	PS	ANTISTATIC	X	X	✓	✓	X	X	✓	✓	✓	✓	✓	Highly concentrated for styrenic polymers
ST 1661 PE	PE	ANTISTATIC	✓	✓	X	X	X	X	✓	✓	✓	✓	✓	Amine based antistatic agent
UV 2375 PE	PE	UV STABILISER	✓	✓	X	X	X	X	✓	✓	✓	✓	✓	Contains polymeric HALS and antioxidant. For long term outdoor use
UV 3598 PE	PE	UV STABILISER	✓	✓	X	X	X	X	✓	✓	✓	✓	✓	Higher strength polymeric HALS . For long term outdoor use
UV 4284 PE	PE	UV STABILISER	✓	✓	X	X	X	X	✓	✓	✓	✓	✓	Mixture of HALS and UV absorber – broad spectrum stabiliser
UV 8534 HP	PP	UV STABILISER	X	✓	X	X	X	X	✓	✓	✓	✓	✓	High performance HALS for long term outdoor stability including textile applications
PE 48/10/96	PE	DESICCANT	✓	✓	X	X	X	✓	✓	✓	✓	✓	✓	Highly loaded for moisture control
M PE ADDITIVE 13533	PE	EXTENDER	✓	✓	X	X	X	X	✓	✓	✓	✓	✓	Highly loaded small particle size calcium carbonate – for use at high addition levels

## Black products

### Speciality Film Masterbatches

GRADE	POLYMER BASE	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office							CARBON BLACK CONTENT	CARBON BLACK TYPE	FOOD CONTACT APPROVED *****	INCLUDES ANTIBLOCK?	RECOMMENDED USE			
		PE	EVA	PP	PS, ABS	PA (Nylon)	PET	PVC					FILM EXTRUSION	OTHER EXTRUSION	INJECTION/BLOW MOULDING	COMPOUNDING
PE 48/92F	PE	✓	*	✓	*	*	*	*	40%	Small particle furnace	✓	X	✓	✓	✓	✓
PE 48/101	PE	✓	*	✓	*	*	*	*	40%	High strength general purpose	✓	X	✓	✓	✓	✓

### Speciality Universal Masterbatches

GRADE	POLYMER BASE	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office							CARBON BLACK CONTENT	CARBON BLACK TYPE	FOOD CONTACT APPROVED *****	INCLUDES ANTIBLOCK?	RECOMMENDED USE			
		PE	EVA	PP	PS, ABS	PA (Nylon)	PET	PVC					FILM EXTRUSION	OTHER EXTRUSION	INJECTION/BLOW MOULDING	COMPOUNDING
UN 53/20	Universal	✓	✓	✓	✓	✓	✓	✓	50%	High jet furnace	✓	X	✓	✓	✓	✓
UN 53/16	Universal	✓	✓	✓	✓	✓	✓	✓	45%	High strength general purpose	X	X	✓	✓	✓	✓
M UN BLACK 12753	Universal	✓	✓	✓	✓	✓	✓	✓	50%	Special food contact compliant, high strength	✓	X	✓	✓	✓	✓
UN 53/17	Universal	✓	✓	✓	✓	✓	✓	✓	35%	High strength general purpose	X	✓	✓	✓	✓	✓
M UN BLACK 12754	Universal	✓	✓	✓	✓	✓	✓	✓	35%	Special food contact compliant, high strength	✓	✓	✓	✓	✓	✓

## Speciality Polymer Specific and other Masterbatches

GRADE	POLYMER BASE	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office							CARBON BLACK CONTENT	CARBON BLACK TYPE	FOOD CONTACT APPROVED *****	INCLUDES ANTIBLOCK?	RECOMMENDED USE			
		PE	EVA	PP	PS, ABS, PC/ABS	PA (Nylon)	PET	PVC					FILM EXTRUSION	OTHER EXTRUSION	INJECTION/BLOW MOULDING	COMPOUNDING
PP 50/10	PP	X	X	✓	X	X	X	X	40%	Small particle furnace	✓	X	X	✓	✓	✓
PS 47/32	PS	X	X	X	✓	X	X	X	40%	High strength general purpose	X	X	X	✓	✓	✓
M PS BLACK 12752E	PS	X	X	X	✓	X	X	X	40%	Special food contact compliant, high strength	✓	X	X	✓	✓	✓
M SAN BLACK 10767	SAN	X	X	X	✓	X	X	X	30%	High jet furnace	✓	X	X	✓	✓	✓
<i>PACE</i> ® PT 4778	PET	X	X	X	X	X	✓	X	30%	Small particle furnace	✓	X	X	✓	✓	✓
EVA 55/10	EVA	✓	✓	X	*	*	*	*	50%	Standard general purpose	X	X	✓	✓	✓	✓
EL 4200	EVA	✓	✓	X	*	*	*	*	40%	Small particle furnace	✓	X	✓	✓	✓	✓

## Functional Black Masterbatches

GRADE	POLYMER BASE	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office							CARBON BLACK CONTENT	CARBON BLACK TYPE	FOOD CONTACT APPROVED *****	INCLUDES ANTIBLOCK?	RECOMMENDED USE			
		PE	EVA	PP	PS, ABS	PA (Nylon)	PET	PVC					FILM EXTRUSION	OTHER EXTRUSION	INJECTION/BLOW MOULDING	COMPOUNDING
PE 48/70F	LDPE	✓	*	✓	*	*	*	*	Not disclosed	High strength general purpose	X	✓	✓	✓	✓	✓
M PE BLACK 12751	LDPE	✓	*	✓	*	*	*	*	Not disclosed	Special food contact compliant, high strength	✓	✓	✓	✓	✓	✓
PE 48/72F	LDPE	✓	*	✓	*	*	*	*	50%	Standard general purpose	X	X	✓	✓	✓	✓
M PE BLACK 13553	LDPE	✓	*	✓	*	*	*	*	40%	Special food contact compliant, high strength	✓	X	✓	✓	✓	✓

## Colour products

### Yellow Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office				HEAT STABILITY **	LIGHT FASTNESS ***	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE	PP					
YELLOW	PE 48/2/2057F	3945C	1016	✓	✓	*	*	240°C	6/7	✓	✓	Greenest shade through to reddest shade standard <b>heavy metal free</b> yellows
	PE 48/2/2450F	107C	None	✓	✓	*	*	240°C	6/7	✓	✓	
	PE 48/2/2905F	N/A	N/A	✓	✓	✓	✓	240°C	7	✓	✓	
	PE 48/2/2904F	114C	1018	✓	✓	✓	✓	240°C	7	✓	✓	
	PE 48/2/2028F	1225C	1003	✓	✓	*	*	230°C	6	✓	✓	
YELLOW	PE 48/2/2449F	N/A	N/A	✓	✓	*	*	240°C	7	X	X	Greenest shade through to reddest shade lead based yellows
	PE 48/2/2787F	108C	None	✓	✓	*	*	240°C	7	X	X	
	PE 48/2/2600F	116C	1023	✓	✓	*	*	240°C	7	X	X	
	PE 48/2/2200F	116C	1023	✓	✓	*	*	240°C	7	X	X	
	PE 48/2/2410F	N/A	N/A	✓	✓	*	*	240°C	7	X	X	

### Orange Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office				HEAT STABILITY **	LIGHT FASTNESS ***	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE	PP					
ORANGE	PE 48/3/1902F	137C	1028	✓	✓	✓	✓	240°C	7	✓	✓	Yellowest shade through to reddest shade <b>heavy metal free</b> oranges
	PE 48/3/1900F	N/A	N/A	✓	✓	*	*	230°C	5	✓	✓	
	PE 48/3/1046F	1645C	None	✓	✓	✓	✓	240°C	5	✓	✓	
ORANGE	PE 48/3/1310F	1495C	2003	✓	✓	*	*	240°C	7	X	X	Yellowest shade through to reddest shade lead based oranges
	PE 48/3/1703F	N/A	N/A	✓	✓	*	*	240°C	7	X	X	
	PE 48/3/1096F	172C	None	✓	✓	*	*	240°C	7/8	X	X	

### Pink Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office				HEAT STABILITY **	LIGHT FASTNESS ***	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE	PP					
PINK	PE 48/4/5246F	1905C	None	✓	✓	✓	✓	270°C	7	✓	✓	Bluest shade through to yellowest shade <b>heavy metal free</b> pinks
	PE 48/4/5080F	176C	None	✓	✓	✓	✓	290°C	7	✓	✓	

## Red Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office				HEAT STABILITY **	LIGHT FASTNESS ***	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE	PP					
RED	PE 48/4/5909F	N/A	N/A	✓	✓	✓	✓	260°C	7	✓	✓	Yellowest shade through to bluest shade <b>heavy metal free</b> reds
	PE 48/4/5557F	179C	None	✓	✓	✓	✓	240°C	5/6	✓	✓	
	PE 48/4/5020F	186C	None	✓	✓	✓	✓	240°C	4	✓	✓	
	PE 48/4/5330F	1795C	None	✓	✓	✓	✓	250°C	6	✓	✓	
	PE 48/4/5505F	187C	3031	✓	✓	*	*	240°C	6	✓	✓	
	PE 48/4/5500F	201C	3002	✓	✓	✓	✓	240°C	6	✓	✓	
RED	PE 48/4/5670F	209C	3004	✓	✓	✓	✓	240°C	6	✓	✓	Yellowest shade through to bluest shade lead based reds
	PE 48/4/5170F	1795C	3020	✓	✓	*	*	240°C	6	X	X	
	PE 48/4/5517F	1797C	None	✓	✓	*	*	240°C	6	X	X	

## Violet Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office				HEAT STABILITY **	LIGHT FASTNESS ***	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE	PP					
VIOLET	PE 48/5/4022F	None	None	✓	✓	✓	✓	240°C	6	✓	✓	

## Blue Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office				HEAT STABILITY **	LIGHT FASTNESS ***	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE	PP					
LIGHT BLUE	PE 48/5/4535F	299C	None	✓	✓	✓	✓	290°C	8	✓	✓	Greenest shade through to reddest shade <b>heavy metal free</b> light blues
	PE 48/5/4012F	298C	None	✓	✓	✓	✓	280°C	8	✓	✓	
	PE 48/5/4300F	2915C	None	✓	✓	✓	✓	280°C	8	✓	✓	
MID BLUE	PE 48/5/4025F	2945C	None	✓	✓	✓	✓	290°C	8	✓	✓	Greenest shade through to reddest shade <b>heavy metal free</b> mid blues
	PE 48/5/4021F	None	None	✓	✓	✓	✓	290°C	8	✓	✓	
DARK BLUE	PE 48/5/4020F	2755C	None	✓	✓	✓	✓	290°C	8	✓	✓	Greenest shade through to reddest shade <b>heavy metal free</b> dark blues
	PE 48/5/4500F	None	None	✓	✓	✓	✓	300°C	8	✓	✓	
	PE 48/5/4656F	289C	None	✓	✓	✓	✓	240°C	7	✓	✓	

## Turquoise Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office				HEAT STABILITY **	LIGHT FASTNESS ***	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE	PP					
TURQUOISE	PE 48/5/4358F	N/A	N/A	✓	✓	✓	✓	280°C	8	✓	✓	

## Green Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office				HEAT STABILITY **	LIGHT FASTNESS ***	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE	PP					
LIGHT GREEN	PE 48/6/3000F	3245C	None	✓	✓	✓	✓	300°C	8	✓	✓	
MID GREEN	PE 48/6/3011F	7482C	None	✓	✓	*	*	240°C	6	✓	✓	Bluest shade through to yellowest shade <b>heavy metal free</b> mid greens
	PE 48/6/3450F	7482C	None	✓	✓	*	*	240°C	6	✓	✓	
	PE 48/6/3116F	N/A	N/A	✓	✓	✓	✓	260°C	7	✓	✓	
	PE 48/6/3012F	355C	None	✓	✓	*	*	240°C	6	✓	✓	
	PE 48/6/3800F	362C	None	✓	✓	*	*	230°C	6	✓	✓	
DARK GREEN	PE 48/6/3015F	316C	None	✓	✓	✓	✓	300°C	8	✓	✓	Bluest shade through to yellowest shade <b>heavy metal free</b> dark greens
	PE 48/6/3641F	N/A	N/A	✓	✓	*	*	240°C	6	✓	✓	
	PE 48/6/3510F	356C	None	✓	✓	*	*	230°C	6	✓	✓	
	PE 48/6/3600F	357C	None	✓	✓	*	*	220°C	8	✓	✓	
MID GREEN	PE 48/6/3888F	N/A	N/A	✓	✓	✓	✓	300°C	8	✓	✓	Bluest shade through to yellowest shade lead based mid greens
	PE 48/6/3251F	355C	None	✓	✓	*	*	240°C	7	X	X	
DARK GREEN	PE 48/6/3420F	362C	None	✓	✓	*	*	240°C	7	X	X	Bluest shade through to yellowest shade lead based dark greens
	PE 48/6/3315F	349C	None	✓	✓	*	*	240°C	7	X	X	
	PE 48/6/3373F	5615C	6020	✓	✓	*	*	240°C	7/8	X	X	

## Silver/Gold Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office				HEAT STABILITY **	LIGHT FASTNESS ***	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE	PP					
SILVER	PE 48/7/7030F	877C	9023	✓	✓	✓	✓	300°C	8	✓	✓	
GOLD	PE 48/7/7171F	872C	None	✓	✓	X	X	200°C	7	✓	✓	

## Beige/Ivory Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office				HEAT STABILITY **	LIGHT FASTNESS ***	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE	PP					
BEIGE	PE 48/2/2097F	None	1001	✓	✓	✓	✓	300°C	8	✓	✓	Greenest shade through to reddest shade <b>heavy metal free</b> beiges
	PE 48/2/1266F	N/A	N/A	✓	✓	✓	✓	250°C	7/8	✓	✓	
IVORY	PE 48/2/9600F	N/A	N/A	✓	✓	✓	✓	300°C	7/8	✓	✓	Greenest shade through to reddest shade <b>heavy metal free</b> ivories
	PE 48/2/9035F	7401C	None	✓	✓	✓	✓	300°C	8	✓	✓	

## Grey Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office				HEAT STABILITY **	LIGHT FASTNESS ***	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE	PP					
GREY	PE 48/7/8368F	N/A	N/A	✓	✓	✓	✓	300°C	8	✓	✓	Darkest shade through to lightest shade <b>heavy metal free</b> greys
	PE 48/7/8035F	C. GRAY 7C	7046	✓	✓	✓	✓	300°C	8	✓	✓	
	PE 48/7/8899F	429C	None	✓	✓	✓	✓	300°C	8	✓	✓	
	PE 48/7/8760F	428C	7040	✓	✓	✓	✓	300°C	8	✓	✓	

## Terracotta/Brown Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office				HEAT STABILITY **	LIGHT FASTNESS ***	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE	PP					
TERRACOTTA	PE 48/8/1340F	174C	None	✓	✓	✓	✓	300°C	8	✓	✓	
MID BROWN	PE 48/8/1281F	161C	8011	✓	✓	✓	✓	300°C	8	✓	✓	
DARK BROWN	PE 48/8/1550F	None	None	✓	✓	✓	✓	300°C	8	✓	✓	Darkest shade through to lightest shade <b>heavy metal free</b> browns
	PE 48/8/1028F	476C	None	✓	✓	✓	✓	300°C	8	✓	✓	

## All Colours

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office				HEAT STABILITY **	LIGHT FASTNESS ***	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE	PP					
YELLOW	PE 48/2/2057F	3945C	1016	✓	✓	*	*	240°C	6/7	✓	✓	Greenest shade through to reddest shade standard <b>heavy metal free</b> yellows
	PE 48/2/2450F	107C	None	✓	✓	*	*	240°C	6/7	✓	✓	
	PE 48/2/2905F	N/A	N/A	✓	✓	✓	✓	240°C	7	✓	✓	
	PE 48/2/2904F	114C	1018	✓	✓	✓	✓	240°C	7	✓	✓	
	PE 48/2/2028F	1225C	1003	✓	✓	*	*	230°C	6	✓	✓	
YELLOW	PE 48/2/2449F	N/A	N/A	✓	✓	*	*	240°C	7	X	X	Greenest shade through to reddest shade lead based yellows
	PE 48/2/2787F	108C	None	✓	✓	*	*	240°C	7	X	X	
	PE 48/2/2600F	116C	1023	✓	✓	*	*	240°C	7	X	X	
	PE 48/2/2200F	116C	1023	✓	✓	*	*	240°C	7	X	X	
	PE 48/2/2410F	N/A	N/A	✓	✓	*	*	240°C	7	X	X	
ORANGE	PE 48/3/1902F	137C	1028	✓	✓	✓	✓	240°C	7	✓	✓	Yellowest shade through to reddest shade <b>heavy metal free</b> oranges
	PE 48/3/1900F	N/A	N/A	✓	✓	*	*	230°C	5	✓	✓	
	PE 48/3/1046F	1645C	None	✓	✓	✓	✓	240°C	5	✓	✓	
ORANGE	PE 48/3/1310F	1495C	2003	✓	✓	*	*	240°C	7	X	X	Yellowest shade through to reddest shade lead based oranges
	PE 48/3/1703F	N/A	N/A	✓	✓	*	*	240°C	7	X	X	
	PE 48/3/1096F	172C	None	✓	✓	*	*	240°C	7/8	X	X	
RED	PE 48/4/5909F	N/A	N/A	✓	✓	✓	✓	260°C	7	✓	✓	Yellowest shade through to bluest shade <b>heavy metal free</b> reds
	PE 48/4/5557F	179C	None	✓	✓	✓	✓	240°C	5/6	✓	✓	
	PE 48/4/5020F	186C	None	✓	✓	✓	✓	240°C	4	✓	✓	
	PE 48/4/5330F	1795C	None	✓	✓	✓	✓	250°C	6	✓	✓	
	PE 48/4/5505F	187C	3031	✓	✓	*	*	240°C	6	✓	✓	
	PE 48/4/5500F	201C	3002	✓	✓	✓	✓	240°C	6	✓	✓	
	PE 48/4/5670F	209C	3004	✓	✓	✓	✓	240°C	6	✓	✓	
RED	PE 48/4/5170F	1795C	3020	✓	✓	*	*	240°C	6	X	X	Yellowest shade through to bluest shade lead based reds
	PE 48/4/5517F	1797C	None	✓	✓	*	*	240°C	6	X	X	
PINK	PE 48/4/5246F	1905C	None	✓	✓	✓	✓	270°C	7	✓	✓	Bluest shade through to yellowest shade <b>heavy metal free</b> pinks
	PE 48/4/5080F	176C	None	✓	✓	✓	✓	290°C	7	✓	✓	
VIOLET	PE 48/5/4022F	None	None	✓	✓	✓	✓	240°C	6	✓	✓	
LIGHT BLUE	PE 48/5/4535F	299C	None	✓	✓	✓	✓	290°C	8	✓	✓	Greenest shade through to reddest shade <b>heavy metal free</b> light blues
	PE 48/5/4012F	298C	None	✓	✓	✓	✓	280°C	8	✓	✓	
	PE 48/5/4300F	2915C	None	✓	✓	✓	✓	280°C	8	✓	✓	

MID BLUE	PE 48/5/4025F	2945C	None	✓	✓	✓	✓	290°C	8	✓	✓	Greenest shade through to reddest shade <b>heavy metal free</b> mid blues
	PE 48/5/4021F	None	None	✓	✓	✓	✓	290°C	8	✓	✓	
DARK BLUE	PE 48/5/4020F	2755C	None	✓	✓	✓	✓	290°C	8	✓	✓	Greenest shade through to reddest shade <b>heavy metal free</b> dark blues
	PE 48/5/4500F	None	None	✓	✓	✓	✓	300°C	8	✓	✓	
	PE 48/5/4656F	289C	None	✓	✓	✓	✓	240°C	7	✓	✓	
TURQUOISE	PE 48/5/4358F	N/A	N/A	✓	✓	✓	✓	280°C	8	✓	✓	
LIGHT GREEN	PE 48/6/3000F	3245C	None	✓	✓	✓	✓	300°C	8	✓	✓	
MID GREEN	PE 48/6/3011F	7482C	None	✓	✓	*	*	240°C	6	✓	✓	Bluest shade through to yellowest shade <b>heavy metal free</b> mid greens
	PE 48/6/3450F	7482C	None	✓	✓	*	*	240°C	6	✓	✓	
	PE 48/6/3116F	N/A	N/A	✓	✓	✓	✓	260°C	7	✓	✓	
	PE 48/6/3012F	355C	None	✓	✓	*	*	240°C	6	✓	✓	
	PE 48/6/3800F	362C	None	✓	✓	*	*	230°C	6	✓	✓	
DARK GREEN	PE 48/6/3015F	316C	None	✓	✓	✓	✓	300°C	8	✓	✓	Bluest shade through to yellowest shade <b>heavy metal free</b> dark greens
	PE 48/6/3641F	N/A	N/A	✓	✓	*	*	240°C	6	✓	✓	
	PE 48/6/3510F	356C	None	✓	✓	*	*	230°C	6	✓	✓	
	PE 48/6/3600F	357C	None	✓	✓	*	*	220°C	8	✓	✓	
	PE 48/6/3888F	N/A	N/A	✓	✓	✓	✓	300°C	8	✓	✓	
MID GREEN	PE 48/6/3251F	355C	None	✓	✓	*	*	240°C	7	X	X	Bluest shade through to yellowest shade lead based mid greens
	PE 48/6/3420F	362C	None	✓	✓	*	*	240°C	7	X	X	
DARK GREEN	PE 48/6/3315F	349C	None	✓	✓	*	*	240°C	7	X	X	Bluest shade through to yellowest shade lead based dark greens
	PE 48/6/3373F	5615C	6020	✓	✓	*	*	240°C	7/8	X	X	
SILVER	PE 48/7/7030F	877C	9023	✓	✓	✓	✓	300°C	8	✓	✓	
GOLD	PE 48/7/7171F	872C	None	✓	✓	X	X	200°C	7	✓	✓	
BEIGE	PE 48/2/2097F	None	1001	✓	✓	✓	✓	300°C	8	✓	✓	Greenest shade through to reddest shade <b>heavy metal free</b> beiges
	PE 48/2/1266F	N/A	N/A	✓	✓	✓	✓	250°C	7/8	✓	✓	
IVORY	PE 48/2/9600F	N/A	N/A	✓	✓	✓	✓	300°C	7/8	✓	✓	Greenest shade through to reddest shade <b>heavy metal free</b> ivories
	PE 48/2/9035F	7401C	None	✓	✓	✓	✓	300°C	8	✓	✓	
GREY	PE 48/7/8368F	N/A	N/A	✓	✓	✓	✓	300°C	8	✓	✓	Darkest shade through to lightest shade <b>heavy metal free</b> greys
	PE 48/7/8035F	C. GRAY 7C	7046	✓	✓	✓	✓	300°C	8	✓	✓	
	PE 48/7/8899F	429C	None	✓	✓	✓	✓	300°C	8	✓	✓	
	PE 48/7/8760F	428C	7040	✓	✓	✓	✓	300°C	8	✓	✓	
TERRACOTTA	PE 48/8/1340F	174C	None	✓	✓	✓	✓	300°C	8	✓	✓	
MID BROWN	PE 48/8/1281F	161C	8011	✓	✓	✓	✓	300°C	8	✓	✓	
DARK BROWN	PE 48/8/1550F	None	None	✓	✓	✓	✓	300°C	8	✓	✓	Darkest shade through to lightest shade <b>heavy metal free</b> browns
	PE 48/8/1028F	476C	None	✓	✓	✓	✓	300°C	8	✓	✓	

## Colour Film

### Yellow Film Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office			HEAT STABILITY **	LIGHT FASTNESS ***	WEATHER FASTNESS ****	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE						
YELLOW	PE 48/2/2057F	394C	1016	✓	✓	*	240°C	6/7	1	✓	✓	Greenest shade through to reddest shade standard <b>heavy metal free</b> yellows
	PE 48/2/2450F	3945C	1016	✓	✓	*	240°C	6/7	1	✓	✓	
	PE 48/2/2905F	3935C	None	✓	✓	✓	240°C	7	3/4	✓	✓	
	PE 48/2/2904F	106C	1018	✓	✓	✓	240°C	7	3/4	✓	✓	
	PE 48/2/2028F	1115C	None	✓	✓	*	230°C	6	1	✓	✓	
YELLOW	PE 48/2/2449F	107C	None	✓	✓	*	240°C	7	4	X	X	Greenest shade through to reddest shade lead based yellows
	PE 48/2/2787F	107C	None	✓	✓	*	240°C	7	4	X	X	
	PE 48/2/2600F	115C	1018	✓	✓	*	240°C	7	4	X	X	
	PE 48/2/2200F	115C	1018	✓	✓	*	240°C	7	4	X	X	
	PE 48/2/2410F	1235C	1003	✓	✓	*	240°C	7	4	X	X	

### Orange Film Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office			HEAT STABILITY **	LIGHT FASTNESS ***	WEATHER FASTNESS ****	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE						
ORANGE	PE 48/3/1902F	150C	None	✓	✓	✓	240°C	7	3/4	✓	✓	Yellowest shade through to reddest shade <b>heavy metal free</b> oranges
	PE 48/3/1900F	1585C	None	✓	✓	*	230°C	5	1	✓	✓	
	PE 48/3/1046F	1645C	2009	✓	✓	✓	240°C	5	1	✓	✓	
ORANGE	PE 48/3/1310F	715C	None	✓	✓	*	240°C	7	4	X	X	Yellowest shade through to reddest shade lead based oranges
	PE 48/3/1703F	1645C	None	✓	✓	*	240°C	7	4	X	X	
	PE 48/3/1096F	1655C	2004	✓	✓	*	240°C	7/8	4	X	X	

### Pink Film Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office			HEAT STABILITY **	LIGHT FASTNESS ***	WEATHER FASTNESS ****	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE						
PINK	PE 48/4/5246F	1905C	None	✓	✓	✓	270°C	7	3/4	✓	✓	Bluest shade through to yellowest shade <b>heavy metal free</b> pinks
	PE 48/4/5080F	176C	None	✓	✓	✓	290°C	7	3	✓	✓	

## Red Film Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office			HEAT STABILITY **	LIGHT FASTNESS ***	WEATHER FASTNESS ****	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE						
RED	PE 48/4/5909F	485C	None	✓	✓	✓	260°C	7	3/4	✓	✓	Yellowest shade through to bluest shade <b>heavy metal free</b> reds
	PE 48/4/5557F	179C	None	✓	✓	✓	240°C	5/6	1	✓	✓	
	PE 48/4/5020F	1788c	None	✓	✓	✓	240°C	4	1	✓	✓	
	PE 48/4/5330F	1795C	None	✓	✓	✓	250°C	6	2	✓	✓	
	PE 48/4/5505F	1797C	None	✓	✓	*	240°C	6	2	✓	✓	
	PE 48/4/5500F	200C	3027	✓	✓	✓	240°C	6	2	✓	✓	
	PE 48/4/5670F	1955C	None	✓	✓	✓	240°C	6	2	✓	✓	
RED	PE 48/4/5170F	179C	None	✓	✓	*	240°C	6	2	X	X	Yellowest shade through to bluest shade lead based reds
	PE 48/4/5517F	186C	None	✓	✓	*	240°C	6	2	X	X	

## Violet Film Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office			HEAT STABILITY **	LIGHT FASTNESS ***	WEATHER FASTNESS ****	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE						
VIOLET	PE 48/5/4022F	2587C	None	✓	✓	✓	240°C	6	2	✓	✓	

## Blue Film Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office			HEAT STABILITY **	LIGHT FASTNESS ***	WEATHER FASTNESS ****	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE						
BLUE TINT (TRANSPARENT)	PE 48/5/4020F	None	None	✓	✓	✓	290°C	8	5	✓	✓	Greenest shade through to reddest shade <b>heavy metal free</b> blue tints
	PE 48/5/4500F	None	None	✓	✓	✓	300°C	8	5	✓	✓	
LIGHT BLUE	PE 48/5/4535F	2995C	None	✓	✓	✓	290°C	8	5	✓	✓	Greenest shade through to reddest shade <b>heavy metal free</b> light blues
	PE 48/5/4012F	298C	None	✓	✓	✓	280°C	8	5	✓	✓	
	PE 48/5/4300F	2915C	None	✓	✓	✓	280°C	8	5	✓	✓	
MID BLUE	PE 48/5/4025F	300C	None	✓	✓	✓	290°C	8	5	✓	✓	Greenest shade through to reddest shade <b>heavy metal free</b> mid blues
	PE 48/5/4021F	2935C	None	✓	✓	✓	290°C	8	5	✓	✓	
DARK BLUE	PE 48/5/4656F	295C	5013	✓	✓	✓	240°C	7	4	✓	✓	

## Turquoise Film Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office			HEAT STABILITY **	LIGHT FASTNESS ***	WEATHER FASTNESS ****	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE						
TURQUOISE	PE 48/5/4358F	None	None	✓	✓	✓	280°C	8	5	✓	✓	

## Green Film Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office			HEAT STABILITY **	LIGHT FASTNESS ***	WEATHER FASTNESS ****	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE						
GREEN TINT (TRANSPARENT)	PE 48/6/3015F	None	None	✓	✓	✓	300°C	8	5	✓	✓	
LIGHT GREEN	PE 48/6/3000F	3245C	None	✓	✓	✓	300°C	8	5	✓	✓	
MID GREEN	PE 48/6/3011F	7482C	None	✓	✓	*	240°C	6	1	✓	✓	Bluest shade through to yellowest shade <b>heavy metal free</b> mid greens
	PE 48/6/3450F	354C	None	✓	✓	*	240°C	6	1	✓	✓	
	PE 48/6/3116F	355C	None	✓	✓	✓	260°C	7	3/4	✓	✓	
	PE 48/6/3012F	None	None	✓	✓	*	240°C	6	1	✓	✓	
	PE 48/6/3800F	362C	None	✓	✓	*	230°C	6	1	✓	✓	
DARK GREEN	PE 48/6/3641F	3308C	None	✓	✓	*	240°C	6	1	✓	✓	Bluest shade through to yellowest shade <b>heavy metal free</b> dark greens
	PE 48/6/3510F	356C	None	✓	✓	*	230°C	6	1	✓	✓	
	PE 48/6/3600F	555C	None	✓	✓	*	220°C	8	4/5	✓	✓	
	PE 48/6/3888F	350C	None	✓	✓	✓	300°C	8	4/5	✓	✓	
MID GREEN	PE 48/6/3251F	355C	None	✓	✓	*	240°C	7	4	X	X	Bluest shade through to yellowest shade lead based mid greens
	PE 48/6/3420F	361C	None	✓	✓	*	240°C	7	4	X	X	
DARK GREEN	PE 48/6/3315F	356C	None	✓	✓	*	240°C	7	4	X	X	Bluest shade through to yellowest shade lead based dark greens
	PE 48/6/3373F	553C	6020	✓	✓	*	240°C	7/8	4/5	X	X	

## Silver/Gold Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office			HEAT STABILITY **	LIGHT FASTNESS ***	WEATHER FASTNESS ****	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE						
SILVER	PE 48/7/7030F	877C	9022	✓	✓	✓	300°C	8	5	✓	✓	
GOLD	PE 48/7/7171F	872C	None	✓	✓	X	200°C	7	4	✓	✓	

## Beige/Ivory Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office			HEAT STABILITY **	LIGHT FASTNESS ***	WEATHER FASTNESS ****	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE						
BEIGE	PE 48/2/2097F	7506C	None	✓	✓	✓	300°C	8	4/5	✓	✓	Greenest shade through to reddest shade <b>heavy metal free</b> beiges
	PE 48/2/1266F	4655C	None	✓	✓	✓	250°C	7/8	4	✓	✓	
IVORY	PE 48/2/9600F	None	9001	✓	✓	✓	300°C	7/8	4	✓	✓	Greenest shade through to reddest shade <b>heavy metal free</b> ivories
	PE 48/2/9035F	7401C	None	✓	✓	✓	300°C	8	4/5	✓	✓	

## Grey Film Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office			HEAT STABILITY **	LIGHT FASTNESS ***	WEATHER FASTNESS ****	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE						
GREY	PE 48/7/8368F	431C	7024	✓	✓	✓	300°C	8	5	✓	✓	Darkest shade through to lightest shade <b>heavy metal free</b> greys
	PE 48/7/8035F	C. GRAY 8C	None	✓	✓	✓	300°C	8	5	✓	✓	
	PE 48/7/8899F	C. GRAY 6C	7045	✓	✓	✓	300°C	8	5	✓	✓	
	PE 48/7/8760F	428C	7040	✓	✓	✓	300°C	8	5	✓	✓	

## Terracotta/ Brown Masterbatch

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office			HEAT STABILITY **	LIGHT FASTNESS ***	WEATHER FASTNESS ****	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE						
TERRACOTTA	PE 48/8/1340F	1675C	None	✓	✓	✓	300°C	8	5	✓	✓	
MID BROWN	PE 48/8/1281F	None	8012	✓	✓	✓	300°C	8	5	✓	✓	
DARK BROWN	PE 48/8/1550F	4975C	None	✓	✓	✓	300°C	8	5	✓	✓	Darkest shade through to lightest shade <b>heavy metal free</b> browns
	PE 48/8/1028F	476C	None	✓	✓	✓	300°C	8	5	✓	✓	

## All Film Colours

COLOUR	GRADE	CLOSEST PANTONE® REFERENCE *	CLOSEST RAL REFERENCE *	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office			HEAT STABILITY **	LIGHT FASTNESS ***	WEATHER FASTNESS ****	FOOD CONTACT APPROVED *****	PACKAGING DIRECTIVE EC 94/62 *****	COMMENTS
				LLDPE	LDPE	HDPE						
YELLOW	PE 48/2/2057F	394C	1016	✓	✓	*	240°C	6/7	1	✓	✓	Greenest shade through to reddest shade standard <b>heavy metal free</b> yellows
	PE 48/2/2450F	3945C	1016	✓	✓	*	240°C	6/7	1	✓	✓	
	PE 48/2/2905F	3935C	None	✓	✓	✓	240°C	7	3/4	✓	✓	
	PE 48/2/2904F	106C	1018	✓	✓	✓	240°C	7	3/4	✓	✓	
	PE 48/2/2028F	1115C	None	✓	✓	*	230°C	6	1	✓	✓	
YELLOW	PE 48/2/2449F	107C	None	✓	✓	*	240°C	7	4	X	X	Greenest shade through to reddest shade lead based yellows
	PE 48/2/2787F	107C	None	✓	✓	*	240°C	7	4	X	X	
	PE 48/2/2600F	115C	1018	✓	✓	*	240°C	7	4	X	X	
	PE 48/2/2200F	115C	1018	✓	✓	*	240°C	7	4	X	X	
	PE 48/2/2410F	1235C	1003	✓	✓	*	240°C	7	4	X	X	
ORANGE	PE 48/3/1902F	150C	None	✓	✓	✓	240°C	7	3/4	✓	✓	Yellowest shade through to reddest shade <b>heavy metal free</b> oranges
	PE 48/3/1900F	1585C	None	✓	✓	*	230°C	5	1	✓	✓	
	PE 48/3/1046F	1645C	2009	✓	✓	✓	240°C	5	1	✓	✓	
ORANGE	PE 48/3/1310F	715C	None	✓	✓	*	240°C	7	4	X	X	Yellowest shade through to reddest shade lead based oranges
	PE 48/3/1703F	1645C	None	✓	✓	*	240°C	7	4	X	X	
	PE 48/3/1096F	1655C	2004	✓	✓	*	240°C	7/8	4	X	X	
RED	PE 48/4/5909F	485C	None	✓	✓	✓	260°C	7	3/4	✓	✓	Yellowest shade through to bluest shade <b>heavy metal free</b> reds
	PE 48/4/5557F	179C	None	✓	✓	✓	240°C	5/6	1	✓	✓	
	PE 48/4/5020F	1788c	None	✓	✓	✓	240°C	4	1	✓	✓	
	PE 48/4/5330F	1795C	None	✓	✓	✓	250°C	6	2	✓	✓	
	PE 48/4/5505F	1797C	None	✓	✓	*	240°C	6	2	✓	✓	
	PE 48/4/5500F	200C	3027	✓	✓	✓	240°C	6	2	✓	✓	
	PE 48/4/5670F	1955C	None	✓	✓	✓	240°C	6	2	✓	✓	
RED	PE 48/4/5170F	179C	None	✓	✓	*	240°C	6	2	X	X	Yellowest shade through to bluest shade lead based reds
	PE 48/4/5517F	186C	None	✓	✓	*	240°C	6	2	X	X	
PINK	PE 48/4/5246F	1905C	None	✓	✓	✓	270°C	7	3/4	✓	✓	Bluest shade through to yellowest shade <b>heavy metal free</b> pinks
	PE 48/4/5080F	176C	None	✓	✓	✓	290°C	7	3	✓	✓	
VIOLET	PE 48/5/4022F	2587C	None	✓	✓	✓	240°C	6	2	✓	✓	
BLUE TINT (TRANSPARENT)	PE 48/5/4020F	None	None	✓	✓	✓	290°C	8	5	✓	✓	Greenest shade through to reddest shade <b>heavy metal free</b> blue tints
	PE 48/5/4500F	None	None	✓	✓	✓	300°C	8	5	✓	✓	
LIGHT BLUE	PE 48/5/4535F	2995C	None	✓	✓	✓	290°C	8	5	✓	✓	Greenest shade through to reddest shade <b>heavy metal free</b> light blues
	PE 48/5/4012F	298C	None	✓	✓	✓	280°C	8	5	✓	✓	
	PE 48/5/4300F	2915C	None	✓	✓	✓	280°C	8	5	✓	✓	

MID BLUE	PE 48/5/4025F	300C	None	✓	✓	✓	290°C	8	5	✓	✓	Greenest shade through to reddest shade <b>heavy metal free</b> mid blues
	PE 48/5/4021F	2935C	None	✓	✓	✓	290°C	8	5	✓	✓	
DARK BLUE	PE 48/5/4656F	295C	5013	✓	✓	✓	240°C	7	4	✓	✓	
TURQUOISE	PE 48/5/4358F	None	None	✓	✓	✓	280°C	8	5	✓	✓	
GREEN TINT (TRANSPARENT)	PE 48/6/3015F	None	None	✓	✓	✓	300°C	8	5	✓	✓	
LIGHT GREEN	PE 48/6/3000F	3245C	None	✓	✓	✓	300°C	8	5	✓	✓	
MID GREEN	PE 48/6/3011F	7482C	None	✓	✓	*	240°C	6	1	✓	✓	Bluest shade through to yellowest shade <b>heavy metal free</b> mid greens
	PE 48/6/3450F	354C	None	✓	✓	*	240°C	6	1	✓	✓	
	PE 48/6/3116F	355C	None	✓	✓	✓	260°C	7	3/4	✓	✓	
	PE 48/6/3012F	None	None	✓	✓	*	240°C	6	1	✓	✓	
	PE 48/6/3800F	362C	None	✓	✓	*	230°C	6	1	✓	✓	
DARK GREEN	PE 48/6/3641F	3308C	None	✓	✓	*	240°C	6	1	✓	✓	Bluest shade through to yellowest shade <b>heavy metal free</b> dark greens
	PE 48/6/3510F	356C	None	✓	✓	*	230°C	6	1	✓	✓	
	PE 48/6/3600F	555C	None	✓	✓	*	220°C	8	4/5	✓	✓	
	PE 48/6/3888F	350C	None	✓	✓	✓	300°C	8	4/5	✓	✓	
MID GREEN	PE 48/6/3251F	355C	None	✓	✓	*	240°C	7	4	X	X	Bluest shade through to yellowest shade lead based mid greens
	PE 48/6/3420F	361C	None	✓	✓	*	240°C	7	4	X	X	
DARK GREEN	PE 48/6/3315F	356C	None	✓	✓	*	240°C	7	4	X	X	Bluest shade through to yellowest shade lead based dark greens
	PE 48/6/3373F	553C	6020	✓	✓	*	240°C	7/8	4/5	X	X	
SILVER	PE 48/7/7030F	877C	9022	✓	✓	✓	300°C	8	5	✓	✓	
GOLD	PE 48/7/7171F	872C	None	✓	✓	X	200°C	7	4	✓	✓	
BEIGE	PE 48/2/2097F	7506C	None	✓	✓	✓	300°C	8	4/5	✓	✓	Greenest shade through to reddest shade <b>heavy metal free</b> beiges
	PE 48/2/1266F	4655C	None	✓	✓	✓	250°C	7/8	4	✓	✓	
IVORY	PE 48/2/9600F	None	9001	✓	✓	✓	300°C	7/8	4	✓	✓	Greenest shade through to reddest shade <b>heavy metal free</b> ivories
	PE 48/2/9035F	7401C	None	✓	✓	✓	300°C	8	4/5	✓	✓	
GREY	PE 48/7/8368F	431C	7024	✓	✓	✓	300°C	8	5	✓	✓	Darkest shade through to lightest shade <b>heavy metal free</b> greys
	PE 48/7/8035F	C. GRAY 8C	None	✓	✓	✓	300°C	8	5	✓	✓	
	PE 48/7/8899F	C. GRAY 6C	7045	✓	✓	✓	300°C	8	5	✓	✓	
	PE 48/7/8760F	428C	7040	✓	✓	✓	300°C	8	5	✓	✓	
TERRACOTTA	PE 48/8/1340F	1675C	None	✓	✓	✓	300°C	8	5	✓	✓	
MID BROWN	PE 48/8/1281F	None	8012	✓	✓	✓	300°C	8	5	✓	✓	
DARK BROWN	PE 48/8/1550F	4975C	None	✓	✓	✓	300°C	8	5	✓	✓	Darkest shade through to lightest shade <b>heavy metal free</b> browns
	PE 48/8/1028F	476C	None	✓	✓	✓	300°C	8	5	✓	✓	

## White products

GRADE	POLYMER BASE	POLYMER COMPATIBILITY							PIGMENT LOADING, equivalent to TiO <sub>2</sub> content	INCLUDES ANTIBLOCK?	RECOMMENDED USE					COMMENTS
		For other polymers please contact Colloids sales office									EXTRUSION FILM	EXTRUSION – PROFILE / SHEET	INJECTION MOULDING	BLOW MOULDING	COMPOUNDING	
		PE	PP	PS	ABS	PA	PET	PVC								
PACE® N 54/1/01	PA-6	X	X	X	X	✓	X	X	50%	X	X	✓	✓	X	✓	Polymer specific masterbatch for PA-6 and PA-6,6 applications
PE 48/1/12F	PE	✓	✓	*	X	*	✓	*	60%	X	✓	✓	✓	✓	✓	High quality - ideal for thin gauge film
PE 48/1/15F	PE	✓	✓	*	X	*	✓	*	50%	✓	✓	✓	✓	✓	✓	For medium gauge film with good antiblock properties
PE 48/1/47F	PE	✓	✓	*	X	*	✓	*	75%	X	✓	✓	✓	✓	✓	High quality and high pigment concentration
PE 48/1/49F	PE	✓	✓	*	X	*	✓	*	70%	X	✓	✓	✓	✓	✓	High quality and high pigment concentration
M PE WHITE 13749	PE	✓	✓	*	X	*	✓	*	70%	✓	✓	✓	✓	✓	✓	High quality and high pigment concentration including antiblock
PP 50/1/11	PP	X	✓	X	X	X	*	X	20%	X	X	✓	✓	X	✓	White masterbatch with blue tint
M PS WHITE 12835	PS	X	X	✓	*	X	X	X	50%	X	X	✓	✓	X	✓	High quality white for a variety of applications including EPS
UN 53/1/03	Universal	✓	✓	✓	*	*	✓	*	75%	X	✓	✓	✓	✓	✓	High strength for diverse applications

## E-TEC® Conductive compounds

GRADE	POLYMER TYPE	DESCRIPTION	APPLICATIONS					TYPICAL SURFACE RESISTIVITY
			EXTRUSION FILM	EXTRUSION SHEET	EXTRUSION PROFILE	INJECTION MOULDING	BLOW MOULDING	
E-TEC® ABS 11368	ABS	Colourless permanently antistatic compound which can be coloured with Colloids standard masterbatches	X	✓	✓	✓	X	10 <sup>9</sup>
E-TEC® PA 4332	Modified PA-6	Black modified polyamide compound with excellent toughness and rigidity	X	X	✓	✓	X	10 <sup>4</sup>
E-TEC® PE 4329	Modified LDPE	Black conductive compound designed for film extrusion down to 75 microns	✓	✓	✓	✓	X	10 <sup>3</sup>
E-TEC® PP 50/CON/2	PP	Black conductive compound offering increased rigidity	X	X	✓	✓	X	10 <sup>3</sup>
E-TEC® PP 10542	PP	Black conductive compound ideal for sheet extrusion including twin wall corrugated sheet	X	✓	X	X	X	10 <sup>3</sup>
E-TEC® PP 11357	PP	Colourless permanently antistatic compound which can be coloured with Colloids standard masterbatches	X	✓	✓	✓	X	10 <sup>9</sup>
E-TEC® PP 13579	PP	Black conductive compound offering increased conductivity compared to other PP grades in the E-TEC® range	X	X	✓	✓	X	10 <sup>2</sup>
E-TEC® PS 13731	Modified PS	Black conductive compound giving good gloss and low shrinkage	X	X	X	✓	X	10 <sup>5</sup>

## PACE® Engineering polymer specific grades

GRADE	POLYMER BASE	POLYMER COMPATIBILITY For other polymers please contact Colloids sales office			COLOURANT / ADDITIVE CONTENT	COLOURANT / ADDITIVE TYPE	FOOD CONTACT APPROVED*	RECOMMENDED USE			OTHER COMMENTS
		PA (Nylon)	PET	PC				COMPOUNDING	EXTRUSION	INJECTION MOULDING	
PACE® N 54/1/01	PA-6	✓	X	X	50%	Titanium dioxide	✓	✓	✓	✓	Superior quality rutile titanium dioxide white masterbatch
PACE® BLACK 4357	PC	X	X	✓	30%	High jet furnace carbon black	✓	✓	✓	✓	Highly effective black colouration with the benefits of a polycarbonate carrier

For further technical information or samples of any of our products please contact the Colloids sales office.